

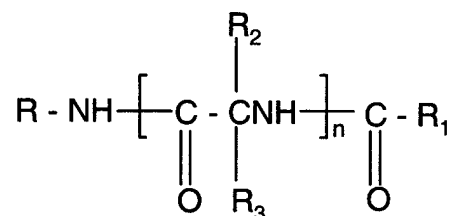
## **AMENDMENTS TO THE CLAIMS:**

The following is a listing of the Claims pending in the above-identified application. This listing of the claims will replace all prior versions and listing of claims in the application. This listing also includes amendments to the claims, which may cancel claims or delete subject matter from the claims. Any claim cancelled or subject matter deleted is without prejudice.

## **LISTING OF CLAIMS:**

1.-34. (Cancelled)

35. (Previously Presented) A method of treating a patient suffering from bipolar disorder comprising administering thereto a therapeutically effective amount of a compound for treating bipolar disorder, said compound having the formula:



wherein

R is aryl lower alkyl, and R is unsubstituted or is substituted with at least one electron withdrawing group or electron donating group;

R<sub>1</sub> is lower alkyl and is unsubstituted or substituted with at least one electron withdrawing group or electron donating group;

R<sub>2</sub> is hydrogen, lower alkyl, lower alkenyl, lower alkynyl, aryl lower alkyl, aryl, halo, heterocyclic, heterocyclic lower alkyl, lower alkyl heterocyclic, lower cycloalkyl, lower cycloalkyl lower alkyl, or Z-Y,

R<sub>3</sub> is lower alkyl, lower alkenyl, lower alkynyl, aryl, aryl lower alkyl, halo, heterocyclic, heterocyclic lower alkyl, lower alkyl heterocyclic, lower cycloalkyl, lower cycloalkyl lower alkyl or ZY; wherein R<sub>2</sub> and R<sub>3</sub> may be unsubstituted or substituted with at least one electron withdrawing group or electron donating group, and wherein heterocyclic in R<sub>2</sub> and R<sub>3</sub> is furyl, thienyl, pyrazolyl, pyrrolyl, imidazolyl, indolyl, thiazolyl, oxazolyl, isothiazolyl, isoxazolyl, piperidyl, pyrrolinyl, piperazinyl, quinolyl, triazolyl, tetrazolyl, isoquinolyl, benzofuryl, benzothienyl, morpholinyl, benzoxazolyl, tetrahydrofuryl, pyranyl, indazolyl, purinyl, indolinyl, pyrazolindinyl, imidazolynyl, imidazolindinyl, pyrrolidinyl, furazanyl, N-methylindolyl, methylfuryl, pyridazinyl, pyrimidinyl, pyrazinyl, epoxy, aziridino, oxetanyl or azetidiny;

Z is O, S, or NR<sub>6</sub>';

Y is hydrogen, lower alkyl, aryl, aryl lower alkyl, lower alkenyl, or lower alkynyl, and Y may be unsubstituted or substituted with an electron donating group or an electron withdrawing group, or

ZY taken together is NR<sub>4</sub>NR<sub>5</sub>R<sub>7</sub>, NR<sub>4</sub>OR<sub>5</sub>, or ONR<sub>4</sub>R<sub>7</sub>;

R<sub>6</sub>' is hydrogen or lower alkyl and R<sub>6</sub>' may be unsubstituted or substituted with an electron withdrawing group or an electron donating group;

R<sub>4</sub> and R<sub>5</sub> are independently hydrogen, lower alkyl, aryl, aryl lower alkyl, lower alkenyl, or lower alkynyl, wherein R<sub>4</sub> and R<sub>5</sub> are independently unsubstituted or substituted with an electron withdrawing group or an electron donating group; and

R<sub>7</sub> is COOR<sub>8</sub>, COR<sub>8</sub>, hydrogen, lower alkyl, aryl, or aryl lower alkyl wherein R<sub>7</sub> may be unsubstituted or substituted with an electron withdrawing group or electron donating group;

R<sub>8</sub> is hydrogen or lower alkyl, or aryl lower alkyl, and the aryl or alkyl group may be unsubstituted or substituted with an electron withdrawing group or an electron donating group; and

n is 1;

wherein the electron withdrawing group and electron donating group are selected from the group consisting of halo, nitro, lower alkenyl, lower alkynyl, formyl, aryl, trifluoromethyl, aryl lower alkanoyl, lower alkoxy carbonyl, hydroxy, lower alkoxy, lower alkyl, mercapto, lower alkylthio and lower alkyldithio.

36. (Previously Presented) The method according to Claim 35 wherein R<sub>2</sub> is hydrogen.

37.-39. (Cancelled)

40. (Previously Presented) The method according to Claim 35 wherein R<sub>2</sub> is hydrogen, lower alkyl, aryl, aryl lower alkyl, heterocyclic lower alkyl or ZY and R<sub>3</sub> are independently lower alkyl, aryl, aryl lower alkyl, heterocyclic, heterocyclic lower alkyl, or ZY; and R<sub>2</sub> and R<sub>3</sub> are independently unsubstituted or substituted with said electron withdrawing group or electron donating group.

41. (Previously Presented) The method according to Claim 40 wherein  $R_2$  is hydrogen and  $R_3$  is lower alkyl, aryl, aryl lower alkyl, heterocyclic, heterocyclic lower alkyl or ZY; which  $R_3$  may be unsubstituted or substituted with said electron withdrawing group or electron donating group.
42. (Previously Presented) The method according to Claim 35 wherein  
 $R_2$  is hydrogen and  $R_3$  is lower alkyl, which may be unsubstituted or substituted with said electron donating or electron withdrawing group.
43. (Previously Presented) The method according to Claim 42 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with hydroxy or lower alkoxy, or  $NR_4OR_5$ , wherein  $R_4$  and  $R_5$  are independently hydrogen or lower alkyl,  $R$  is aryl lower alkyl, which aryl group may be unsubstituted or substituted with said electron withdrawing group or electron donating group and  $R_1$  is lower alkyl.
44. (Original) The method according to Claim 41 wherein  $R_3$  is heterocyclic.
45. (Original) The method according to Claim 44 wherein heterocyclic is heteroaromatic.
46. (Original) The method according to Claim 45 wherein  $R_3$  is furyl, pyridyl, thienyl or thiazolyl.
47. (Original) The method according to Claim 43 wherein aryl is phenyl.
48. (Original) The method according to Claim 43 wherein aryl is phenyl and is unsubstituted or substituted with halo.
49. (Previously Presented) The method according to Claim 35 wherein the compound is

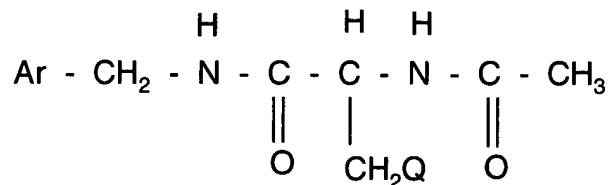
(R)-N-Benzyl-2-acetamido-3-methoxy- propionamide;  
 O-methyl-N-acetyl-D-serine-m-fluorobenzylamide;  
 O-methyl-N-acetyl-D-serine-p-fluorobenzylamide;  
 N-acetyl-D-phenylglycinebenzylamide;  
 D-1,2-(N, O-dimethylhydroxylamino)-2- acetamide acetic acid benzylamide;  
 D-1,2-(O-methylhydroxylamino)-2-acetamide acetic acid benzylamide.

50.-56. (Cancelled)

57. (Original) The method according to Claim 35 wherein the carbon atom which is substituted by R<sub>2</sub> and R<sub>3</sub> is in the D configuration.

58.-67. (Cancelled)

68. (Previously Presented) The method of Claim 35 wherein the compound is of the formula:



wherein

Ar is aryl which is unsubstituted or substituted with an electron donating or electron withdrawing group, and

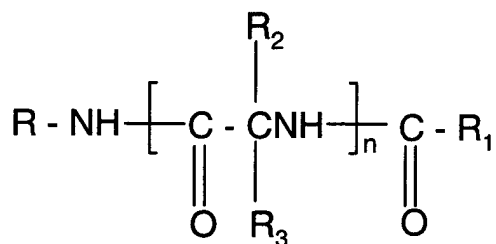
Q is lower alkoxy.

69. (Original) The method according to Claim 68 wherein Ar is unsubstituted aryl or aryl substituted with halo.
70. (Original) The method according to Claim 68 wherein Q is methoxy.
71. (Original) The method according to Claim 68 wherein Q is methoxy and Ar is unsubstituted aryl or aryl substituted with halo.
72. (Original) The method according to Claim 68 wherein the carbon atom which is bonded to CH<sub>2</sub>Q is in the D configuration.
73. (Previously Presented) The method according to Claim 35 wherein R is benzyl which may be unsubstituted or substituted with an electron withdrawing group or electron donating group.
74. (Previously Presented) The method according to Claim 35 wherein R<sub>1</sub> is methyl.
75. (Previously Presented) The method according to Claim 35 wherein R is benzyl, R<sub>1</sub> is lower alkyl and R<sub>2</sub> is hydrogen.
76. (Previously Presented) The method according to Claim 75 wherein R<sub>3</sub> is CH<sub>2</sub>Q, NR<sub>4</sub>OR<sub>5</sub> or NR<sub>4</sub>NR<sub>5</sub>R<sub>7</sub>, wherein Q is lower alkoxy, R<sub>4</sub> is hydrogen or alkyl containing 1-3 carbon atoms, R<sub>5</sub> is hydrogen or alkyl containing 1-3 carbon atoms and R<sub>7</sub> is hydrogen or alkyl containing 1-3 carbon atoms.

77. (Previously Presented) The method according to Claim 76 wherein  $R_3$  is  $CH_2Q$ .
78. (Previously Presented) The method according to Claim 35 wherein  $R_1$  is methyl,  $R$  is benzyl,  $R_2$  is hydrogen, and  $R_3$  is  $CH_2Q$  wherein  $Q$  is methoxy.
79. (Previously Presented) The method according to Claim 35 wherein  $R_1$  is methyl,  $R$  is m-fluorobenzyl,  $R_2$  is H and  $R_3$  is  $CH_2Q$ , wherein  $Q$  is methoxy.
80. (Previously Presented) The method according to Claim 35 wherein  $R_1$  is methyl,  $R$  is p-fluorobenzyl,  $R_2$  is H, and  $R_3$  is  $CH_2Q$  wherein  $Q$  is methoxy.
81. (Previously Presented) The method according to Claim 35 wherein  $R_1$  is methyl,  $R$  is benzyl,  $R_2$  is hydrogen and  $R_3$  is phenyl.
82. (Previously Presented) The method according to Claim 35 wherein  $R_1$  is methyl,  $R$  is benzyl,  $R_2$  is hydrogen and  $R_3$  is  $N(CH_3)OCH_3$ .
83. (Previously Presented) The method according to Claim 35 wherein  $R_1$  is methyl,  $R$  is benzyl,  $R_2$  is hydrogen and  $R_3$  is  $NH(OCH_3)$ .
84. (Previously Presented) The method according to Claim 35 wherein  $R_1$  is methyl,  $R$  is fluorophenyl,  $R_2$  is H, and  $R_3$  is  $CH_2Q$ , wherein  $Q$  is methoxy.

85.–102. (Cancelled)

103. (Currently Amended) A method for treating a patient suffering from bipolar disorder comprising administering to said patient a therapeutically amount of a compound of the formula:



wherein

R is aryl lower alkyl and R is unsubstituted or is substituted with at least one electron withdrawing group or electron donating group selected from the group consisting of halo, nitro, lower alkenyl, lower alkynyl, formyl, aryl, trifluoromethyl, lower alkoxy carbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, mercapto, lower alkylthio, and lower alkyldithio;

R<sub>1</sub> is methyl, and is unsubstituted or substituted with an electron donating group or an electron withdrawing group selected from the group consisting of halo, nitro, lower alkenyl, lower alkynyl, formyl, aryl, trifluoromethyl, lower alkoxy carbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, mercapto, lower alkylthio, and lower alkyldithio;

R<sub>2</sub> is hydrogen, lower alkyl, lower alkenyl, lower alkynyl, aryl, aryl lower alkyl, halo, heterocyclic, heterocyclic lower alkyl, lower alkyl heterocyclic, lower cycloalkyl, lower cycloalkyl lower alkyl, or ZY;

R<sub>3</sub> is lower alkyl, lower alkenyl, lower alkynyl, aryl, aryl lower alkyl, halo, heterocyclic, heterocyclic lower alkyl, lower alkyl heterocyclic, lower cycloalkyl, lower cycloalkyl lower alkyl or ZY;



wherein  $R_2$  and  $R_3$  may be unsubstituted or substituted with at least one electron withdrawing group or electron donating group and wherein heterocyclic in  $R_2$  and  $R_3$  is furyl, thienyl, pyrazolyl, pyrrolyl, imidazolyl, indolyl, thiazolyl, oxazolyl, isothiazolyl, isoxazolyl, piperidyl, pyrrolinyl, piperazinyl, quinolyl, triazolyl, tetrazolyl, isoquinolyl, benzofuryl, benzothienyl, morpholinyl, benzoxazolyl, tetrahydrofuryl, pyranyl, indazolyl, purinyl, indolinyl, pyrazolindinyl, imidazolynyl, imidazolindinyl, pyrrolidinyl, furazanyl, N-methylindolyl, methylfuryl, pyridazinyl, pyrimidinyl, pyrazinyl, epoxy, aziridino, oxetanyl or azetidiny;

Z is O, S, or  $NR_6'$ ;

Y is hydrogen, lower alkyl, aryl, aryl lower alkyl, lower alkenyl or lower alkynyl, and Y may be unsubstituted or substituted with an electron donating group or an electron withdrawing group, or

ZY taken together is  $NR_4NR_5R_7$ ,  $NR_4OR_5$ , or  $ONR_4R_7$ ;

$R_6'$  is hydrogen or lower alkyl;

$R_4$  and  $R_5$  are independently hydrogen, lower alkyl, aryl, aryl lower alkyl, lower alkenyl, or lower alkynyl, and  $R_4$  and  $R_5$  may be independently unsubstituted or substituted with an electron withdrawing group or an electron donating group;

$R_7$  is  $COOR_8$ ,  $COR_8$ , hydrogen, lower alkyl, aryl or aryl lower alkyl, which  $R_7$  may be unsubstituted or substituted with an electron withdrawing group or electron donating group;

$R_8$  is hydrogen or lower alkyl, or aryl lower alkyl, and the aryl or alkyl group may be unsubstituted or substituted with an electron withdrawing group or an electron donating group; and

n is 1.

104. (Previously Presented) The method according to Claim 103 wherein  $R_1$  is methyl which is unsubstituted.

105. (Previously Presented) The method according to Claim 103 wherein R is benzyl, which is unsubstituted or substituted on the phenyl ring with said electron donating group or electron withdrawing group.

106. (Previously Presented) The method according to Claim 104 wherein R is benzyl, which is unsubstituted or substituted on the phenyl ring with said electron donating group or electron withdrawing group.

107. (Previously Presented) The method according to Claim 103 wherein  $R_2$  is hydrogen.

108. (Previously Presented) The method according to Claim 104 wherein  $R_2$  is hydrogen.

109. (Previously Presented) The method according to Claim 105 wherein  $R_2$  is hydrogen.

110. (Previously Presented) The method according to Claim 106 wherein  $R_2$  is hydrogen.

111. (Previously Presented) The method according to Claim 103 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

112. (Previously Presented) The method according to Claim 104 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

113. (Previously Presented) The method according to Claim 105 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

114. (Previously Presented) The method according to Claim 106 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

115. (Previously Presented) The method according to Claim 107 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing

group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

116. (Previously Presented) The method according to Claim 108 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

117. (Previously Presented) The method according to Claim 109 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl, hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

118. (Previously Presented) The method according to Claim 110 wherein  $R_3$  is lower alkyl which is unsubstituted or substituted with an electron donating group or electron withdrawing group selected from the group consisting of halo, nitro, carboxy, lower alkenyl, lower alkynyl, formyl, aryl, carboxyamido, trifluoromethyl, lower alkoxycarbonyl, aryl lower alkanoyl,

hydroxy, lower alkoxy, lower alkyl, amino, lower alkylamino, dilower alkylamino, aryloxy, mercapto or lower alkylthio.

119. (Previously Presented) The method according to any one of Claims 103-118 wherein  $R_3$  is lower alkyl substituted with said electron donating group.

120. (Previously Presented) The method according to Claim 119 wherein  $R_3$  is lower alkyl substituted by lower alkoxy.